

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows. This listing of claims will replace all prior listings.

1-5. (CANCELLED)

6. (PREVIOUSLY PRESENTED) A method of computer control of an HVAC system comprising the steps of:

- (1) inferring whether a stage of an HVAC component is a failed stage by:
 - (a) monitoring a temperature of a controlled area;
 - (b) monitoring a slope of the relationship between the temperature of the controlled area and the time period
 - (c) inferring whether the stage has failed from a relationship between the temperature of the controlled area and a time period; and
- (2) removing the failed stage detected in said step (1) from a staging sequence.

7. (PREVIOUSLY PRESENTED) A method of computer control of an HVAC system comprising the steps of:

- (1) inferring whether a stage of an HVAC component is a failed stage;
 - (a) monitoring a temperature of a controlled area;
 - (b) monitoring a rate of change of a relationship between the temperature of the controlled area and the time period.
 - (c) inferring whether the stage has failed from a relationship between the temperature of the controlled area and a time period; and
- (2) removing the failed stage detected in said step (1) from a staging sequence.

8-9. (CANCELLED)

10. (PREVIOUSLY PRESENTED) A method of computer control of an HVAC system comprising the steps of:

- (1) monitoring a rate of change of a relationship between a temperature of a controlled area and a time period for a first stage of an HVAC component;
- (2) determining whether the first stage is a failed stage in response to said step (1);
and
- (3) removing the failed stage determined in said step (2) from a staging sequence.

11. (ORIGINAL) A method as recited in claim 10, wherein said step (1) further comprises the step of:

determining whether the rate of change is greater than a prior rate of change of a prior stage of the HVAC component.

12. (PREVIOUSLY PRESENTED) A method of computer control of an HVAC system comprising the steps of:

- (1) monitoring a rate of change of a relationship between a temperature of a controlled area and a time period for a first stage of an HVAC component and comparing the rate of change to a stored rate of change for the first stage;
- (2) determining whether the first stage is a failed stage in response to said step (1);
and
- (3) removing the failed stage determined in said step (2) from a staging sequence.

13. (ORIGINAL) A method as recited in claim 12, further comprises the step of:
inputting the stored rate of change into a controller which communicates with the HVAC component.

14. (ORIGINAL) A method as recited in claim 12, further comprises the step of:
learning the stored rate of change over a multiple of cycles of the first stage.

15. (ORIGINAL) A method as recited in claim 14, further comprises the step of:
determining a configuration of the HVAC component in response to learning the stored
rate of change of a multiple of stages comprising the first stage.

16. (ORIGINAL) A method as recited in claim 14, further comprises the step of:
incorporating a gain into a control algorithm for the first stage in response to the stored
rate of change to obtain a desired rate of change.

17. (ORIGINAL) A method as recited in claim 14, further comprises the step of:
relating a recovery time period to the stored rate of change to achieve a designated
temperature at a desired time.

18. (PREVIOUSLY PRESENTED) A method of computer control of an HVAC
system comprising the steps of:

- (1) monitoring a first rate of change of a first relationship between a
temperature of a controlled area and a first time period for a first stage of
an HVAC component;
- (2) monitoring a second rate of change of a second relationship between the
temperature of the controlled area and a second time period for a second
stage of the HVAC component;
- (3) determining whether the second stage is a failed stage in response to said
steps (1) and (2); and
- (4) removing the failed stage determined in said step (3) from a staging
sequence.

19. (ORIGINAL) A method as recited in claim 18, further comprises the step of:
determining a configuration of the HVAC component in response to said steps (1) and
(2).

20. (ORIGINAL) A method as recited in claim 18, wherein said step (3) further comprises the step of:

determining if the second rate of change is less than the first rate of change; and
determining that the second stage is a failed stage.

21. (CANCELLED)